

# *Scrolling Bowls*

*Second Edition*



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# Scrolling Bowls - Background

- Scrolling Bowls (sometimes referred to as “Wobble Bowls”) is an aspect of Scrolling that provides a useful as well as decorative piece of artwork that can be completed in a relative short period of time by all skill levels.
  - Beginners to Advanced
  - Small amount of waste
  - Allows for creative ideas
  - Multiple wood types can be used by edge gluing.
    - Good way to make use of left over or waste wood (narrow strips) that cannot be used for anything else.
- The majority of Wobble Bowls are made up of individual scrolled “rings” that are stacked and glued to form the bowl in a concentric pattern.
  - Rings can also be compressed fitted and glued by angle cutting at about two (2) degrees.
    - NOTE: **additional caution needed during the cutting process for a tight and consistent fit**
- Wood selection is important to get acceptable results.
  - Woods with heavy, irregular grain or “checks” may crack or separate during the cutting process depending on pattern design.
- Wood preparation is important to reduce the finishing process time.
  - Both surfaces will be visible (top and bottom of bowl) so a fine sanding should be completed before applying the pattern.
    - Finishing to a 220 grit smoothness is recommended at this stage.
  - Wood needs to be very flat to insure good results.

# *Scrolling Bowls - Placing The Pattern*

- Although both sides of the bowl will be visible there may be a more desirable side to be the top. As such, the pattern should be applied as the top or most visible.
- If cutting a bowl using edge glued wood, additional steps need to be taken to center the pattern for a pleasing concentric look.
- Make sure the pattern is well bonded as loose or lifting patterns make accurate cutting real difficult and frustrating.
- If there is a chance of “burning” (like with Cherry, African Rosewood and other hard, close grained woods), take additional steps like applying blue painters tape, or equivalent, to prevent the burning and to make removing pattern easier.
  - Due to the nature of cutting numerous inside circles or curves it is difficult to detect a burn until it is too late.

# Scrolling Bowls - Drilling Pilot Holes

- Since both sides of the bowl will be visible it is important to minimize pilot hole “breakout” on the bottom side.
  - Always use a sharp drill bit and the recommended drill speed. Too slow of a drill speed may increase breakout simply because the bit may “tear” the wood and not cut it as the drill exits the bottom.
  - Using a scrap backboard will also minimize breakout. The backboard should not be stationary as each hole drilled needs to drill a new hole in the backboard to be effective.
    - ✓ As a footnote: Even with all the precautions, certain woods have a grain pattern that leads to tear. A good example is open grained Walnut or Red Oak.
  - Never use a hand drill as the pilot hole must be absolutely vertical. This factor is extremely important if stacking is done.
  - The exception to being 100% vertical is if making a compressed fit bowl where an angled pilot hole needs to be the same angle the scroll saw is set.
- The Pilot hole size should be the smallest possible to minimize the remaining “slots” after cutting that will have to be carefully sanded or filled and sanded.
- After all the pilot holes are drilled carefully sand the bottom side in the direction of the grain so there will be no rough surfaces to deal with when cutting the numerous “constant feed” radii.

# Scrolling Bowls - Making The Cuts

- As a general practice, sawing from the inside of the pattern working to the outside is standard. However, sawing Bowls with less chance of breaking rings by sawing the outside ring first and working towards the center may be the better choice.
  - Blade selection should be based on personal choice and experience with saw, wood types and thickness. However, using higher TPI (teeth per inch) blades may result in a smoother surface on the many surfaces and would reduce sanding.
  - Sawing outside working towards the center will always be working with a solid piece of wood.
  - If sawing inside first, working towards the outside, the last couple of rings may become flexible and there is a tendency to sway off the line or even breaking the ring. This possible breaking is especially true on one-quarter inch thick wood.
  - Sawing outside first towards the inside seems to make it less difficult to sand the Pilot hole slot on the next ring to be sawn. “sand as you go”.
  - DO NOT RUSH CUTS – maintain a constant cutting action, minimizing stops and starts to avoid “burns” in a radius. If you sway off the line, gradually work back to the line to blend back to pattern. Remember: once the pattern is removed – Who Knows? MAINTAIN BLADE TENSION when going to next ring.
  - On ½ inch thick wood or thicker, especially hard wood, there is a tendency to want to “push” the cut – the result may be “burns” or slanted cuts as the blade may bend. This especially critical if making a compressed fit design.

# Scrolling Bowls - Gluing (Non-Compression Design)

- Once the Bowl has been cut out and pattern removed, the sanding off of the pilot hole slots is next as well as breaking edges on the many cuts and curves to provide a “finished “ look. Slightly breaking the edges will provide a better surface for the finish coat.
  - On compressed fit designs, breaking edges should not be done until after glue up.
- Gluing up the **Non-Compression design Bowl** is a key step requiring patience.
  - Most all bowls have dozens of glue points so it is important to lay out how the rings will be placed and laying the rings out on a workspace in preparation.
    - Double check this step
  - Make sure all glue surfaces are clean. A quick cleaning with Mineral Spirits is a good insurance policy for long lasting glue joints (let dry before gluing).
  - Choose a glue to balance setup time and to minimize clamp or weighted hold-down time.
  - It is also important to choose a glue that will leave the least amount of residue as it is extremely difficult and time consuming to clean off runs, bubbles or flow out of a glue that will be visible after clear coating.
    - ✓ As another Footnote; Using a CA Medium Glue seems to provide the best balance. It is recommended to not used glues like Titebond yellow as it leaves too many “tell tail” signs and cure time is too long.
  - Unless a gluing fixture or jig has been made (mass production technique) the proper alignment of the rings is a “visual” technique requiring good lighting and proper positioning such that you are able to look directly down.
  - Clamping or weighting down individual rings is a matter of temporarily holding down the rings until they are reasonably secured. Weighting down the fully assembled bowl for a longer period of time may be wise to get full cure.

# Scrolling Bowls - Gluing (Compression Design)

- Gluing up the **Compression design Bowl** is also a key step requiring patience.
  - Unlike the non-compression design bowls the glue points can be considered “spot gluing” points as the compression fit provides the majority of the strength. Like all glue ups make sure all glue surfaces are clean. A quick cleaning with Mineral Spirits is a good insurance policy for long lasting glue joints (let dry before gluing).
  - Selecting the gluing “spots” will be determined by the design. It is recommended to select quadrants, minimum four, to spread the glue. It is not required to spread glue the entire length of the wood mating surfaces. It is however, important to minimize the glue “drag” when fitting the rings together. Too much glue will literally leave a mess which may be difficult to clean up. This is a case where technique used is important as there is no good, better or best way.
  - It is also important to choose a glue that will leave the least amount of residue as it is extremely difficult and time consuming to clean off runs, bubbles or flow out of a glue that will be visible after clear coating.
    - ✓ In the case of compression designs, CA Medium is NOT recommended as it may set up too quickly when adjusting rings. Likewise, don't use Titebond Yellow type glue as it will leave too much glue residue that will be visible after finishing.
    - ✓ Using a glue like Aleene's Clear Gel Tacky Glue seems to provide balance between cure time, clear finish and a gel consistency that will not run
  - In general, the use of weighting or clamps will not be required as the tight compression fit will hold the rings firmly until the glue has cured.

# Scrolling Bowls - Finishing

- Once the Bowl is glued up and dry, it is now time for pre-finishing sanding.
  - Removing any glue residue should be a short task if the gluing process went well.
  - A final once over sanding and dust removal in preparation for the final finish is in order.
- Many Bowls are useful and may require some thought about which finish to apply.
  - Using a bowl to hold fruit may need to be finished with a Polyurethane instead of a Lacquer.
  - The sheen of the finish is a personal preference but choosing Glossy instead of Satin or Semi-gloss will affect the resulting look. Here again; personal preference.
  - Drying times vary significantly from product to product but is especially different between a Lacquer and Polyurethane. Likewise, the fumes or odors vary and with a slower drying, Poly odors may linger.
  - Likewise, choosing a Poly over Lacquer will likely increase time between coats which will affect when and where you might do the finish work.
  - Aerosol spray is more practical for finishing Bowls than by brushing simply due to the small and numerous surfaces and contours. However, overspray, even with a clear finish can be an issue. To understand the nature of the finish it is suggested that the bottom surfaces of the bowl be sprayed first as this will help show what the results may be before proceeding to the top surfaces.

# *Scrolling Bowls - Other Hints on Finishing*

- Using a “Lazy Susan” for the spray platform will help give a consistent finish, minimizing heavy runs or overspray and light spots.
- Test your spray can nozzle before starting. Test between coats as well. Clean as appropriate with Mineral Spirits.
- “Squeezing” that very last drop out of the can may result in drips and drabs on an otherwise great looking project. Have another can ready.
- Sanding between coats is a personal preference based on experience and how the surfaces feel. It is however important that the surfaces are dry before any sanding and very important that the dust be completely removed before the next coat.
  - ✓ As another Footnote; reworking Lacquer is far easier and “forgiving” than Polyurethane. As such, patience in the final phase is a “Virtue”.
  - ✓ As a final step, use a simple piece of a paper bag to finish.